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PUBLICATION NUMBER : 07209398
PUBLICATION DATE : 11-08-95

APPLICATION DATE : 24-01-94
APPLICATION NUMBER : 06005602

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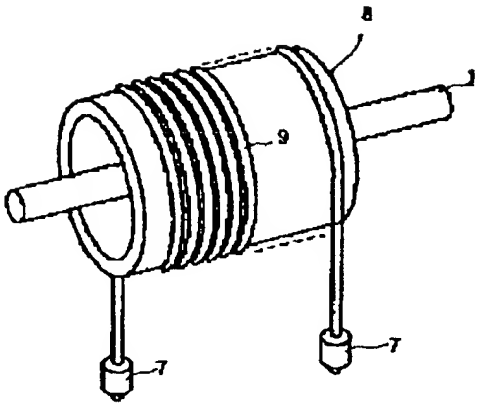
INT.CL. : G01R 33/032 G01R 15/24 G02B 6/17

TITLE : FARADAY EFFECT TYPE OPTICAL FIBER SENSOR AND CURRENT TRANSFORMER



ABSTRACT : PURPOSE: To obtain a Faraday effect type optical fiber sensory from which a magnetic field sensor or a current sensor of high precision is obtainable by suppressing an adverse effect due to birefringence and a change in the birefringence (rotary polarization) due to temperature, and a current transformer using the same.

CONSTITUTION: A right-rotation twist section and a left-rotation twist section are provided in an optical fiber of a single mode having a prescribed length, and the number of twists for a distance is made equal practically for these sections, while the accumulated number of twists in the right-rotation twist section and the accumulated number of twists in the left-rotation twist section are made equal practically to each other. The optical fiber thus prepared is held in a tube 9 and the tube 9 is wound round on a bobbin 8. Accordingly, the polarization plane maintaining property of the optical fiber is enhanced and the rotatory power due to temperature is canceled. Besides, highly accurate measurement of a current is enabled by a simple structure.